MEDICAL ASSISTANT
MEDICAL OFFICE ADMINISTRATIVE ASSISTANT

CIP Code:	Medical Assistant	51.0801	Benchmarks 1 - 4
Units of Credit:	2.0		
CIP Code:	Medical Office Administrative Assistant	51.0703	Benchmarks 1 - 2
Units of Credit:	1.0		
Levels:	12-14		
Skill Certificate:	Available		

Medical Assistant Description: An instructional program that prepares individuals to support physicians by providing assistance during patient examinations, treatment administration and monitoring; by keeping patient and related health record information; and by performing clinical, administrative and laboratory duties.

Medical Office Administrative Assistant Description: An instructional program that prepares individuals to perform routine clerical and reception duties in patient care and within a health care facility. Includes instruction in receiving and directing patients, transcribing medical records, medical records management, preparation of forms, appointment scheduling, client billing/collections and insurance.

Standards and Objectives
(September 2006)

MEDICAL TERMINOLOGY
Benchmark 1

STANDARD Medical Terminology 85% - 60 Questions
01 Students will interpret and apply medical terminology.

OBJECTIVES
01.01 Identify basic structure of medical words.
01.02 Apply word building and definitions.

STANDARD Medical Abbreviations 15% - 10 Questions
02 Students will interpret and apply medical abbreviations.

OBJECTIVES
02.01 Interpret medical abbreviations.
02.02 Apply medical abbreviations.

MEDICAL ASSISTANT
MEDICAL OFFICE ADMINISTRATIVE ASSISTANT

MEDICAL OFFICE MANAGEMENT
Benchmark 2

STANDARD Medical Office Management 5% - 4 Questions

01 Students will explore the medical assistant profession and its role in the health care setting.

OBJECTIVES

01.01 Identify career opportunities.
01.02 Adopt characteristics needed for a quality medical assistant.
01.03 Outline work related skills.
01.04 Differentiate between administrative and clinical skills.
01.05 Outline workplace dynamics in a health care setting.
01.06 Briefly explain the history of medicine.
01.07 Identify allied health professions and credentialing requirements.
01.08 Categorize medical practice career specialties.

STANDARD Medical Law and Ethics 15% - 10 Questions

02 Students will analyze the legal and ethical issues that impact the medical office.

OBJECTIVES

02.01 Identify legal guidelines/requirements for health care.
02.02 Evaluate medical ethics and related issues.
02.03 Apply risk management processes.
02.04 Differentiate between ethics and etiquette.
02.05 Interpret medical law terminology.
02.06 Outline the purpose of the medical practice act.

STANDARD Basic Computer Knowledge Performance Skills

03 Students will apply the skills necessary to utilize computer applications commonly used in a health care setting.

OBJECTIVES

03.01 Generate a patient record.
03.02 Prepare a billing statement.
03.03 Complete an insurance form.
03.04 Demonstrate computer literacy.

MEDICAL OFFICE MANAGEMENT
Benchmark 2

STANDARD Office Environment 5% - 4 Questions

04 Students will identify procedures that contribute to a pleasant and safe environment.

OBJECTIVES

04.01 Adopt appropriate professional appearance.
04.02 Collect new patient data.
04.03 Demonstrate the following:
- Opening and closing the office.
- Greeting and responding to the patient.
- Escorting and instructing the patient.

04.04 Develop a plan on how to solve the following problems:
- Late appointment.
- Angry patient.
- The talking patient.
- Missed appointment.

04.05 Identify the following scheduling techniques:
- Streaming scheduling.
- Establish the matrix.
- Wave scheduling.
- Modified wave scheduling.
- Double booking.
- Group scheduling.
- Open office hours.

STANDARD Communication 20% - 15 Questions

05 Students will apply effective communication principles in health care settings.

OBJECTIVES

05.01 Identify importance of oral, written and nonverbal communication.
05.02 Schedule appointments by phone.
05.03 Demonstrate methods of receiving, placing and recording calls:
- Triage phone calls.
- Answer the office telephone.
- Receive, evaluate and record a phone message.
- Make referrals by phone.

05.04 Identify letter styles and their usages.
05.05 Describe the essential components of a letter.
05.06 Evaluate appropriate professional behaviors.
05.07 Adopt personal maturity in coping with current social issues.
05.08 Contrast sympathy vs. empathy.
05.09 Develop effective listening skills.
05.10 Outline the steps of the grieving process.
05.11 Demonstrate the following:
- Open and sort business correspondence.
- Compose, develop and address business correspondence.
- Demonstrate proofreading skills.
- Describe the parts of speech.

05.12 Describe defense mechanisms.

MEDICAL OFFICE MANAGEMENT
Benchmark 2

STANDARD Medical Records Management 10% - 6 Questions
06 Students will perform clerical functions in a medical office setting.

OBJECTIVES
06.01 Distinguish between subjective and objective information.
06.02 Maintain patient charts.
06.03 Organize alphabetical and numerical filings.
06.04 Apply basic knowledge and skill of medical dictation.
06.05 Demonstrate ability to type 25 wpm.
06.06 Demonstrate ability to transcribe medical dictation.

STANDARD Office Finances 30% - 21 Questions
07 Students will perform bookkeeping and financial functions in a medical office setting.

OBJECTIVES
07.01 Prepare a bank deposit.
07.02 Describe a bank statement.
07.03 Post entries on a day sheet.
07.04 Perform accounts receivable and payable procedures.
07.05 Review accounting procedures.
07.06 Write a check.
07.07 Establish and maintain a petty cash fund.
07.08 Explain the considerations for determining medical fees.
07.09 Prepare and describe the following:
- Ledgers, record charges and credits.
- Patient ledger card.
- Patient itemized monthly statement.

STANDARD Insurance/Coding 15% - 10 Questions
08 Students will perform proper insurance, coding and billing procedures.

OBJECTIVES
08.01 Prepare insurance claims.
08.02 Determine procedural and diagnostic coding.
08.03 Complete an HCFA insurance form.
08.04 Identify the terms associated with insurance.

MEDICAL OFFICE MANAGEMENT
Benchmark 2

STANADARD Employment-Seeking Skills Performance Skills
09 Students will apply the skills necessary for securing employment.

OBJECTIVES

09.01 Demonstrate appropriate professional attributes.
09.02 Demonstrate job readiness skills.
09.03 Describe workplace dynamics.
09.04 Prepare a resume'.
09.05 Write a cover letter.
09.06 Write a follow-up letter.

MEDICAL ASSISTANT

ANATOMY and PHYSIOLOGY
Benchmark 3

STANDARDS and OBJECTIVES
Students will describe the anatomy and physiology of each body system, disease processes and diagnostic treatment modalities.

01 Integumentary System **10% - 7 Questions**

OBJECTIVES
01.01 Identify the layers of the skin (epidermis, dermis, subcutaneous layer) and appendages (nails, sweat [sudoriferous] glands, oil [sebaceous] glands, hair).

01.02 Describe pathologies of the integumentary system: athlete's foot, hives, herpes, melanoma, decubitus ulcers, acne, warts, pediculosis, rash, lesions and ringworm.

01.03 Identify the functions of the integumentary system: protection against water loss, protection against infection, vitamin D production, sensory organ, absorption of medications, excretion of water and salts, temperature regulation, protection against UV light.

01.04 Describe the process and stages of wound healing.

01.05 Describe the symptoms of inflammation (redness, swelling, heat, and pain), why inflammation occurs, and the role of histamine.

02 Musculoskeletal System **20% - 13 Questions**

OBJECTIVES
02.01 Identify the functions of the skeletal system: hematopoiesis (blood cell production), structure, support, muscle attachment and movement, mineral storage.

02.02 Identify basic bones of the skeleton: cranium (frontal, parietal, occipital, temporal, maxillae, mandible), vertebrae (cervical, thoracic, lumbar), sternum, xiphoid process, ribs, humerus, radius, ulna, carpals, metacarpals, phalanges, pelvis (ilium, ischium, pubis), femur, tibia, fibula, tarsals, metatarsals, and phalanges).

02.03 Identify the following fractures: simple (closed), compound (open), greenstick, impacted, comminuted, spiral, and Colles.

02.04 Describe pathologies of the skeleton: osteoarthritis, rheumatoid arthritis, osteoporosis, scoliosis, congenital hip dysplasia, carpal tunnel syndrome, bursitis, gouty arthritis, sprains and fatty emboli.

02.05 Identify the major functions of muscles: heat production, movement, structure, protection.

ANATOMY and PHYSIOLOGY
Benchmark 3

02.06 Differentiate between cardiac (striated, involuntary, intercalated disks, found in the heart), smooth (no striations, involuntary, found in hollow organs like the stomach), and skeletal muscles (striated, voluntary, found along the bones).

02.07 Differentiate between tendons and ligaments.

02.08 Identify muscles including: deltoid, gluteus, rectus femoris, vastus lateralis, and diaphragm.

02.09 Identify and describe pathologies of the muscular system including: strains, sprains, atrophy, tendonitis, and fibromyalgia.

03 Circulatory System (including Cardiovascular and Immune Systems) 15% - 11 Questions

OBJECTIVES

03.01 Identify the general functions of the circulatory systems: transportation of nutrients and wastes, transportation of heat, transportation of oxygen and carbon dioxide, transportation of hormones, antibodies, and enzymes.

03.02 Identify structures (septum, myocardium, inferior and superior vena cavae, right atrium, tricuspid valve, right ventricle, pulmonary semilunar valve, pulmonary trunk, pulmonary arteries, lungs, pulmonary veins, left atrium, bicuspid [mitral] valve, left ventricle, aortic semilunar valve, aorta) and function of the heart.

03.03 Describe the following routes of circulation:

- Systemic (oxygenated blood pumped through the body – blood is pumped by the left ventricle, aortic semilunar valve, aorta, arteries, capillaries, veins, vena cava, right atrium).
- Pulmonary (deoxygenated blood pumped from the heart to the lungs for gas exchange and oxygenated blood pumped from the lungs back to the heart; right ventricle, pulmonary semilunar valve, pulmonary arteries, lungs, pulmonary veins, left atrium).
- Coronary (oxygenated blood is pumped from the left atrium into the aorta and leaves through the very first branches, the coronary arteries, which lead to the myocardium).

03.04 Locate the major arteries (aorta, carotid, radial, brachial, femoral) and veins (jugular, inferior vena cava, superior vena cava) of the systemic circulatory system.

03.05 Describe the structures and functions of arteries (outer layer connective tissue; middle layer – thick smooth muscle; inner layer – endothelium; take blood away from the heart), capillaries (single layer endothelium; gas and nutrient exchange between the blood and body cells), and veins (same layers as the arteries but thinner; inner endothelial layer modified with valves to prevent backflow of blood; take blood towards the heart).

03.06 Describe pathologies of the cardiovascular system including: aneurysm, embolus, angina pectoris, myocardial infarction, arteriosclerosis, atherosclerosis, cardiac arrest, cerebrovascular accident (CVA – stroke), hypertension, murmur, phlebitis, thrombophlebitis and varicose veins.

ANATOMY and PHYSIOLOGY
Benchmark 3

03.07 List the functions of the lymphatic system: transport excess tissue fluid to the blood vessels, immunity.

03.08 Describe the functions of the major structures of the immune system: tonsils (lymphatic tissue in the pharynx which helps to remove pathogens from food and air), and lymph nodes (masses of lymphatic tissue which filters pathogens from lymph).

03.09 Describe the Lines of Defense including the physical/chemical barrier, nonspecific immunity, and specific immunity.

03.10 Describe the components and functions of the immune system: antigen – foreign protein which stimulates the immune response, antibody – protein made by the body to protect against antigens, T-cells – responsible for CMI or cell mediated immunity, and B-cells – responsible for AMI or antibody (humoral) mediated immunity.

03.11 Differentiate between active and passive immunity.

03.12 Describe pathologies of the immune system including: autoimmune disorders, HIV, AIDS, mononucleosis, chronic fatigue syndrome, Hodgkin's Disease, and systemic lupus erythema.

04 Respiratory System **10% - 7 Questions**

OBJECTIVES

04.01 Identify structures (nose, nasal cavity, pharynx, epiglottis, larynx, trachea, bronchi, bronchioles, lungs, alveoli) and their functions (warm, moisten and filter air, sound production, carbon dioxide-oxygen gas exchange) of the respiratory system.

04.02 Describe pathologies of the respiratory system including: upper respiratory infection (URI), laryngitis, lung cancer, post nasal drip (PND), pneumonia, sudden infant death syndrome (SIDS), sinusitis, tuberculosis (TB), asthma, bronchitis, emphysema, chronic obstructive pulmonary disease (COPD), epistaxis and influenza.

04.03 Describe the common signs and symptoms of respiratory distress: dyspnea (pursed lip breathing), tachypnea, wheezing.

05 Digestive System **10% - 7 Questions**

OBJECTIVES

05.01 Describe the general functions of the digestive system: ingestion, digestion, absorption, and excretion.

05.02 Describe the physiology of alimentary canal organs (mouth, pharynx, esophagus, stomach, small intestines, large intestines, rectum, anus) and their role in digestion.

ANATOMY and PHYSIOLOGY
Benchmark 3

05.03 Describe the physiology of the accessory organs: salivary glands (saliva), pancreas (digestive enzymes), liver and gallbladder (bile).

05.04 Describe pathologies of the digestive system including: inguinal hernia, irritable bowel syndrome, colon cancer, hiatal hernia, diverticulitis, ulcers, hemorrhoids, hepatitis, Crohn's disease, appendicitis and cirrhosis.

06 Nervous System **11% - 8 Questions**

OBJECTIVES

06.01 Describe the general functions of the nervous system: sensation, interpretation, and movement by conduction of impulses.

06.02 Identify the following components of the nervous system: brain, spinal cord, cerebrospinal fluid (CSF), meninges (dura mater, arachnoid mater, pia mater), and neuron.

06.03 Identify the following brain structures and their functions: cerebrum (frontal, parietal, occipital, temporal lobes), cerebellum, midbrain, brain stem (medulla, pons), and hypothalamus.

06.04 Differentiate between the CNS and PNS.

06.05 Describe the autonomic nervous system including the sympathetic and parasympathetic divisions.

06.06 Describe pathologies of the nervous system including: Alzheimer's, Parkinson's, Bell's Palsy, amyotrophic lateral sclerosis (ALS), epilepsy, headaches, meningitis, herpes zoster, MS, spina bifida, hydrocephalus, hemiplegia, paraplegia, quadriplegia, Reye's Syndrome and sciatica.

07 Endocrine System **10% - 7 Questions**

OBJECTIVES

07.01 Describe the general functions of the endocrine system: regulate growth, development, maturation, and chemical balance by the production of hormones.

07.02 Describe what a hormone is and how it works.

07.03 Describe the major locations, secretions (hormones) and functions of the following glands: pituitary (growth hormone, ACTH, TSH, oxytocin), thyroid (thyroxine), pancreas (islet cells of Langerhans – insulin, glucagon), adrenal glands (cortisol, adrenaline, noradrenaline), ovaries (estrogen, progesterone), and testes (testosterone).

07.04 Describe pathologies of the endocrine system including: Diabetes Mellitus Type 1, Diabetes Mellitus Type 2, hypothyroidism, gigantism, dwarfism, Cushing's syndrome, Addison's disease and hyperthyroidism.

ANATOMY and PHYSIOLOGY
Benchmark 3

08 Reproductive System (Male and Female) 10% - 7 Questions

OBJECTIVES

08.01 Describe the functions of the reproductive systems: production of gametes (egg and sperm) by the gonads and to produce hormones to help in the maturation process.

08.02 Describe the structures of the female reproductive system (ovaries, uterine tubes [Fallopian tube]), uterus [cervix, endometrium], vagina) and their functions.

08.03 Diagram the typical 28-day menstrual cycle including the hormones FSH, LH, estrogen, and progesterone, and the effects on the endometrium and the ovaries.

08.04 Describe the structures of the male reproductive system (testes, scrotum, epididymis, vas deferens, prostate gland, and urethra) and their functions.

08.05 Describe pathologies of the reproductive system including: ovarian cysts, amenorrhea, dysmenorrhea, premenstrual syndrome (PMS), menopause, pelvic inflammatory disease (PID), cervical cancer, endometriosis, fibroids, ovarian cancer, breast cancer, epididymitis, impotence, and testicular cancer.

08.06 Describe the following procedures - vasectomy, circumcision, testicular self exam (TSE), breast self exam (BSE), and dilation and curettage (D&C).

09 Cell and Tissue Structure 1% - 1 Question
Students will identify the structures and functions of the cell and tissues.

OBJECTIVES

09.01 Describe the differences between the outcomes of mitosis and meiosis in terms of chromosomes and cell numbers.

09.02 Identify the transport mechanisms of diffusion, osmosis and filtration.

09.03 Identify the levels of organization (chemicals-organelles-cells-tissues-organs-organ systems-organisms).

09.04 Identify the general structure and functions of the 4 basic tissue types: (epithelial – coverings and linings, connective – support and structure, muscular – movement, and nervous – interpretation and nerve impulse conduction).

ANATOMY and PHYSIOLOGY
Benchmark 3

10 Body Plane, Cavities, and Directional Terms **3% - 2 Questions**
Students will describe body planes and cavities.

OBJECTIVES

10.01 Describe body planes (frontal (coronal), sagittal, transverse, horizontal).

10.02 Locate body cavities and the organs they contain: cranial – brain; spinal or vertebral – spinal cord; thoracic – heart and lungs; abdominal – liver, most of the intestines, stomach, gallbladder, spleen, kidneys; and pelvic – urinary bladder and internal reproductive organs.

10.03 Define directional terms: medial, lateral, proximal, distal, inferior, superior, anterior, ventral, dorsal, and posterior.

10.04 Identify the four major abdominal quadrants and the organs in each quadrant.
Right upper quadrant (RUQ) – liver, gallbladder, right kidney
Left upper quadrant (LUQ) – stomach, spleen, pancreas, left kidney
Right lower quadrant (RLQ) – appendix, right ovary
Left lower quadrant (LLQ) – left ovary

MEDICAL ASSISTANT

CLINICAL and LABORATORY PROCEDURES
Benchmark 4

STANDARD Vital Signs 20% - 14 Questions

01 Students will collect baseline information and compare it to normal values.

OBJECTIVES

01.01 Demonstrate ability to measure and read oral temperatures.
01.02 Demonstrate ability to measure adult height and weight.
01.03 Demonstrate ability to measure pulse and respiration.
01.04 Demonstrate ability to measure blood pressure.
01.05 Explain terms, normal values and abnormalities associated with vital signs.

STANDARD Pharmacology and Administration of Medications 25% - 18 Questions

02 Students will describe the classification of drugs, their actions and common side effects.

OBJECTIVES

02.01 Perform dosage calculations.
02.02 Identify drug classifications.
02.03 Maintain medication and immunization records.
02.04 Demonstrate ability to utilize the Physician's Desk Reference.
02.05 Apply pharmacology principles to prepare and administer medications.

- Demonstrate ability to administer oral medications.
- Demonstrate ability to prepare an injection from a vial and an ampule.
- Demonstrate ability to administer intradermal, subcutaneous and intramuscular injections through simulation.

STANDARD Physical Exams 15% - 10 Questions

03 Students will acquire the skills necessary to accurately organize the patient history and prepare the patient for the physical examination.

OBJECTIVES

03.01 Demonstrate ability to obtain accurate patient history and assessment.
03.02 Demonstrate ability to obtain height, weight and head-circumference for an infant.
03.03 Demonstrate ability to drape and position patients for common diagnostic procedures.
03.04 Set up and assist with physical examination.
03.05 Demonstrate ability to administer procedures for the ear.
03.06 Demonstrate the ability to measure vision.
03.07 Determine color vision acuity, using the Ishihara method.
03.08 Screen visual acuity, using the Snellen eye chart
03.09 Demonstrate appropriate use of crutches, cane, walker and wheelchair.

CLINICAL and LABORATORY PROCEDURES
Benchmark 4

STANDARD Basic Concepts of Asepsis and Sterilization 15% - 10 Questions
04 Students will analyze disease transmission and apply disease prevention principles.

OBJECTIVES
04.01 Demonstrate aseptic hand wash.
04.02 Demonstrate surgical hand wash.
04.03 Demonstrate how to sanitize and disinfect instruments.
04.04 Demonstrate how to wrap instruments for autoclave.
04.05 Prepare and operate the autoclave.
04.06 Apply Standard Precautions.
04.07 Describe principles of infection control.
- Identify the various classifications of microbes including viruses, bacteria, protozoa and fungi.

STANDARD Assist with Basic Minor Surgery 5% - 4 Questions
05 Students will apply sterile techniques and demonstrate assisting with minor surgery.

OBJECTIVES
05.01 Identify instruments by name, use and category.
05.02 Demonstrate opening a sterile pack.
05.03 Prepare patient for minor surgery.
05.04 Apply sterile gloves.
05.05 Demonstrate ability to assist with minor surgery.
05.06 Demonstrate a sterile dressing change.
05.07 Demonstrate suture removal.
05.08 Assemble a basic suture tray.

STANDARD CPR / First Aid Performance Skills
06 Students will obtain Cardiopulmonary Resuscitation and First Aid Certification.

OBJECTIVES
06.01 Demonstrate CPR certification on infant, child and adult.
06.02 Assess emergency situations.
06.03 Demonstrate the following proper bandaging and ace wrap applications:
- Bandage in recurrent turn to finger.
- Bandage in open or closed spiral.
- Figure-eight bandage to hand and wrist.
- Cravat bandage to forehead, ear and eyes.
- Apply a triangular bandage to scalp.
- Apply an arm sling.

CLINICAL and LABORATORY PROCEDURES
Benchmark 4

STANDARD Electrocardiography 5% - 4 Questions

07 Students will demonstrate how to use the electrocardiograph.

OBJECTIVES

07.01 Describe the electrical conduction system of the heart.
07.02 Describe "PQRST".
07.03 Identify the parts of the electrocardiograph.
07.04 Describe artifacts of an ECG.
07.05 Describe how to prevent artifacts.
07.06 Identify 12 leads and codings for each lead.
07.07 Demonstrate ability to obtain a standard 12 lead ECG.
07.08 Identify other tests used to determine heart and blood vessel function.

STANDARD Laboratory Procedures 14% - 10 Questions

08 Students will learn skills necessary to perform diagnostic testing, laboratory safety procedures, and the collecting and testing of laboratory specimens.

OBJECTIVES

08.01 Urinalysis:
- Describe organs of the urinary tract.
- Describe pathology of urinary tract.
- Describe tests and procedures of the system.
- Describe clean-catch midstream specimen collection instruction.
- Demonstrate use of Multistix 10G Reagent Strips.
- Prepare urine for microscopic exam.

08.02 Hematology:
- Identify components of blood and function of each.
- Differentiate between plasma and serum.
- Describe the normal values for an erythrocyte sedimentation rate; hematocrit and hemoglobin; white and red blood cell counts, and platelet counts; and differential count.
- Locate body sites for capillary and venipuncture.
- Demonstrate a skin puncture with a sterile lancet/autolet.
- Demonstrate and obtain venous blood through simulation using vacuum method with multiple tubes.
- Perform microhematocrit and glucose from finger stick.
- Describe the functions of common laboratory tests, including Hct, CBC, PKU, FBS, GTT and Hemoccult®.

08.03 Microbiology:
- Describe gram positive and negative bacteria.
- Prepare a culture and describe sensitivity testing.
- Demonstrate ability to obtain throat culture specimen.
- Identify parts of and use the microscope.

MEDICAL ASSISTANT
EXTERNSHIP

STANDARD Externship Performance Skills
01 Students will successfully complete an externship.

OBJECTIVES
01.01 Complete a 160 hour minimum externship.
01.02 Externship evaluations will indicate satisfactory or higher rating.

STANDARD Professional Attributes Performance Skills
02 Students will demonstrate professional attributes.

OBJECTIVES
02.01 Demonstrate the following:
- Honesty and integrity.
- Reliability and punctuality.
- Appropriate communication skills.
- Cooperation and teamwork.
- Initiative and adaptability.

02.02 Externship evaluations will indicate satisfactory or higher rating.